

The Cross-Race Effect

People are reliably better at recognizing faces of their own race than faces of another, less familiar race. This phenomenon — called the cross-race effect, the own-race bias, or the other-race effect — is one of the most thoroughly replicated findings in the study of memory for faces, and one of the most consequential for the law, because mistaken cross-race identifications figure prominently among the wrongful convictions later overturned by DNA. Two points must be clear at the outset. First, the effect is not a measure of prejudice or hostility; it is a feature of how perception and memory work, and it appears in people of every race, each group recognizing its own faces more accurately than others'. Second, the effect describes a difference in average accuracy across many witnesses, not a verdict about whether any particular identification is right or wrong. This paper explains what the cross-race effect is, how large and robust it is, why it occurs, and how courts have responded. It assumes no background in psychology, and the science here favors no party.

What the Cross-Race Effect Is

The cross-race effect is the consistent finding that adults recognize faces of their own race more accurately than faces of another race with which they have less familiarity. Observations of the phenomenon date to the early twentieth century (Feingold, 1914), but the past several decades have produced an extensive empirical literature documenting its operation in eyewitness identification. Reviewing that literature, one summary observed that "the number of studies that have replicated the other-race effect is impressive; few psychological findings are so easy to duplicate" (Chance & Goldstein, 1996). Surveys of eyewitness researchers reflect that confidence: in one widely cited survey, ninety percent of experts regarded the evidence for the cross-race effect as reliable enough to present in court (Kassin, Tubb, Hosch, & Memon, 2001).

Crucially, the effect is symmetrical across groups. Meta-analytic work finds that the own-race advantage is of similar magnitude for Black and White witnesses, and the same pattern has been documented across a wide range of racial and ethnic comparisons worldwide (Bothwell, Brigham, & Malpass, 1989). Everyone is, on average, better with their own group's faces and weaker with another group's. The bias is in the perceptual and cognitive machinery of face recognition, not in any group's attitudes.

How Large and How Robust: The Meta-Analyses

Several meta-analyses have quantified the effect. Early reviews found it robust and consistent: Shapiro and Penrod (1986) and Bothwell, Brigham, and Malpass (1989) reported moderate effect sizes and noted that own-race bias appeared in roughly four out of five samples reviewed, and Anthony, Copper, and Mullen (1992) confirmed the pattern. The most comprehensive analysis pooled 39 studies and nearly 5,000 participants (Meissner & Brigham, 2001). It found a "mirror effect": compared with other-race faces, own-race faces were about 1.4 times more likely to be correctly recognized and about 1.56 times less likely to be falsely identified — so that, overall, witnesses were more than twice as likely to accurately distinguish a previously seen own-race face from a new one. The increased risk of a mistaken identification with other-race faces is the part of this pattern most directly relevant to wrongful conviction.

Two findings about when the effect is largest carry particular weight for the law. Meissner and Brigham (2001) found that the own-race bias grew when the face shown at test differed in appearance from the face originally seen, when viewing time was brief, and when the delay between viewing and identification was long. These are precisely the conditions of real crimes — a fleeting and often disguised view of the perpetrator, followed weeks or months later by an identification. Far from being a laboratory artifact that would shrink under realistic conditions, the cross-race effect tends to be amplified by them.

Why It Happens: Competing and Converging Theories

Two broad families of explanation have dominated the field. The perceptual-expertise (or contact) account holds that people become skilled at the visual processing that individuates faces through experience with them, and have less of that experience with other-race faces; on this view, greater interracial contact should reduce the effect (Brigham & Malpass, 1985). Contact does matter, but surprisingly little: across studies, self-reported interracial contact accounts for only about two percent of the variance in the cross-race effect (Meissner & Brigham, 2001). The second family is social-cognitive: people tend to process an out-group face categorically — registering it chiefly as "a member of that group" — while individuating in-group faces by attending to what makes each one distinct. The leading modern framework, the categorization-individuation model, integrates these ideas, arguing that the effect arises from the joint operation of social categorization, the motivation to individuate, and perceptual experience (Hugenberg, Young, Bernstein, & Sacco, 2010).

Several lines of evidence favor this integrative view. The effect can be shifted by purely social manipulations: how a face is socially categorized — by apparent social class, or by group affiliation — changes recognition even among faces of the same race (Shriver, Young, Hugenberg, Bernstein, & Lanter, 2008). Own-race faces are processed more holistically, as integrated wholes, while other-race faces are processed more by isolated features (Tanaka, Kiefer, & Bukach, 2004). Reviews of the competing theories now conclude that neither perceptual expertise nor social cognition alone suffices, and that hybrid models combining both best fit the evidence (Young, Hugenberg, Bernstein, & Sacco, 2012; Sporer, 2001). For legal purposes the precise mechanism matters less than the well-established consequence: other-race faces are encoded with less individuating detail and are therefore harder to recognize accurately and easier to confuse.

Children, Field Studies, and the Real World

The cross-race effect is not confined to adults or to the laboratory. It has been documented in children, who, like adults, recognize own-race faces more accurately than other-race faces (Pezdek, Blandon-Gitlin, & Moore, 2003) — a point developed in the companion paper on children's face recognition. It also appears in field settings: in a classic study, convenience-store clerks asked to identify customers of various races who had made purchases earlier in the day identified own-race customers more accurately and made more errors with other-race customers (Platz & Hosch, 1988). Archival analyses of actual cases point the same way, with cross-race identifications showing higher error rates than same-race identifications. One further finding underscores that the effect reflects encoding quality rather than anything benign: alcohol intoxication has been found to reduce the own-race bias, but it does so by degrading recognition of own-race faces toward the already-poor level of other-race faces — impairing accuracy across the board rather than improving cross-race recognition (Hilliard, Kemp, & Denson, 2010).

Reducing the Effect

Because the effect is rooted in how faces are encoded, it is not easily eliminated. Interracial contact reduces it only modestly, and brief training to individuate other-race faces can lower the bias but tends to wear off quickly. Within the justice system, the more dependable safeguards are procedural and educational rather than perceptual: constructing fair lineups so that the witness must rely on memory for the suspect's specific features rather than on race; documenting the witnessing conditions that intensify the effect (exposure time, delay, view); and — most importantly at trial — informing the jury, through expert testimony or a cautionary instruction, that cross-race identifications carry a heightened risk of error. The aim of these measures is not to disregard cross-race identifications but to ensure they are produced and evaluated with the care their elevated error rate warrants.

The Cross-Race Effect and the Law

Traditional identification doctrine did not squarely address race. The reliability factors of *Neil v. Biggers* (1972) and *Manson v. Brathwaite* (1977) say nothing specific about cross-race identification, and *Perry v. New Hampshire* (2012) left the reliability of an identification to the jury where no improper police suggestion was involved. Drawing on the science, several state courts have gone further. In *State v. Henderson* (2011), the New Jersey Supreme Court listed the cross-race effect among the estimator variables that can undermine reliability and that juries should be told to weigh. Earlier, in *State v. Cromedy* (1999), that court had held that a cross-racial identification instruction must be given when identification is a critical issue and the cross-race identification is not corroborated. Other high courts have followed and strengthened this approach: Massachusetts now directs that a cross-racial instruction be included with the model eyewitness instruction in essentially every case involving a cross-race identification (*Commonwealth v. Bastaldo*, 2015), and New York has likewise required such an instruction on request (*People v. Boone*, 2017).

Whether an expert may explain the cross-race effect to a jury is governed by the general standards for expert evidence — *Daubert v. Merrell Dow Pharmaceuticals* (1993), as extended by *Kumho Tire Co. v. Carmichael* (1999), or the *Frye* general-acceptance test still followed in some jurisdictions (*Frye v. United States*, 1923). Because the effect rests on decades of replicated research, multiple meta-analyses, and near-unanimous expert endorsement, it is among the better-supported and more frequently admitted subjects of eyewitness expert testimony. As always, such testimony informs the trier of fact that cross-race identifications carry a heightened average risk of error; it does not establish that any particular identification is mistaken, which remains a question for the fact-finder.

Special Issues in Legal Practice

The principles described above apply with equal force to every party in a legal proceeding. Memory operates the same way regardless of who is asking the questions, and the science summarized here favors no side. What differs between the parties is not the science but the vantage point — the particular places where memory issues tend to surface, and the particular errors each party is best positioned to guard against. The two summaries below identify those recurring issues. They are offered for orientation, not as litigation strategy; in every case the controlling question is what the evidence in that case will, and will not, support, and the expert's role is to inform the trier of fact rather than to advocate for either side.

Special Issues for Prosecutors

For the State, a cross-race identification calls for care in how it is obtained and presented, not for treating it as worthless. The issue most likely to surface is the heightened average error rate when a witness identifies a perpetrator of another race, particularly under the brief-exposure, long-delay, changed-appearance conditions that worsen the effect. The error best guarded against is presenting a cross-race identification as if race posed no special concern, when the research and a growing body of case law treat it as a recognized risk factor. The State is well positioned to strengthen such evidence by ensuring a fair lineup that forces reliance on the suspect's specific features, by documenting the witnessing conditions, by recording the witness's confidence at the first identification under proper procedures, and by seeking corroboration independent of the identification. Evidence developed this way can be presented candidly, with its reliability demonstrated rather than assumed.

Understood this way, the science supports rather than defeats well-founded identifications. A cross-race identification obtained under good conditions, corroborated, and presented with appropriate acknowledgment of the effect is far more durable than one offered as though race were irrelevant, and forthright handling forestalls the instruction and expert challenges that a less careful presentation invites.

Special Issues for Defense

For the defense, the recurring task is to assess whether a cross-race identification was produced and tested under conditions that the research associates with elevated error. The issue most likely to surface is reliance on a cross-race identification made after a brief or stressful view, a long delay, or a suggestive or poorly constructed lineup — circumstances that compound the own-race bias. The error best guarded against is overclaiming: the cross-race effect is a probabilistic finding about average accuracy, not proof that a particular identification is wrong, and same-race identifications are themselves fallible. The sounder course is to examine the specific witnessing and procedural conditions, to seek a cross-racial cautionary instruction where the law provides for one, and, where admissible, to offer expert testimony explaining the effect and the conditions that intensify it.

The corresponding safeguard is to ensure the trier of fact understands the science accurately: that the cross-race effect is robust, well replicated, and symmetrical across races; that it raises the risk of mistaken identification, especially under realistic crime conditions; and that it bears on the weight of an identification without, by itself, determining its accuracy. Presented this way — neither as proof of error nor as a comment on anyone's attitudes — expert testimony and a cautionary instruction can help the factfinder weigh a cross-race identification with appropriate care.

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